

December 18, 2007 REVISED

ORENCO SYSTEMS INC
JASON CHURCHILL
814 AIRWAY AVE
SUTHERLIN OR 97470

Re: Description: SEWAGE TREATMENT APPARATUS (also see SEWAGE TANKS)
Manufacturer: ORENCO SYSTEMS INC
Product Name: ADVANTEX-TREATMENT SYSTEM
Model Number(s): AX 20
Product File No: 20060366

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of October 2011.**

This approval is contingent upon compliance with the following stipulation(s):

- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- All processing tanks used with AdvanTex Treatment Systems must be approved by Orenco Systems Engineering Department.
- Based on testing data submitted and reviewed by the department, this approval recognizes that when the influent strength is does not exceed the levels listed in Table 1, this plumbing product produces effluent not exceeding the performance levels indicated in Table 2.

Table 1
Recirculated-blend tank influent* strength

	Average	Average Weekly Peak	Rarely Exceed
BOD5 (mg/L)	130	200	300
TSS (mg/L)	40	60	150
TKN (mg/L)	65	75	150
Oil & Grease (mg/L)	20	25	25

* Influent is defined as primary sewage entering the recirculating tank from a septic tank (where separate tanks are used) or entering the recirculation compartment from the primary compartment where a two-compartment processing tank is used.

Table 2
AX20 filter effluent characteristics

	Average
BOD5 (mg/L)	10 (maximum)
TSS (mg/L)	10 (maximum)
Total Nitrogen (mg/L)	65% reduction* (minimum)
Fecal Coliform (cfu/100 ml)	1000 (maximum)

* Expected Total Nitrogen reduction relative to system influent

- This product may only serve one- or two-family dwellings. The number of AX20 filter units and required tankage must be in accordance with specifications contained in Orenco Systems, Inc. document number NDA-ATX-2 Rev. 4.3, copyright 11/05 entitled "AdvanTex Design Criteria for Residential Applications."

TABLE 3 INSPECTION, MAINTENANCE AND PUMPING
PRODUCT/ (Models): ORENCO (AdvanTex AX20)

Initial/Startup Inspection/ Maintenance:	Inspect at startup; inspect/maintain three to six months following startup, or more frequently as determined by local requirements or by system operator.
Routine Inspection/Maintenance:	Inspect annually or more frequently as determined by local requirements or by system operator.
Ongoing Pumping Cycle And/Or Requirements:	Check scum/sludge accumulation every 2 to 3 years at minimum; pump as necessary, or as per local requirements
Back-Wash Cycle:	N/A
Effluent Performance Levels:	BOD = 10 mg/L max.; TSS = 10 mg/L max.; Total Nitrogen = 65% reduction; fecal coliform = 10,000 cfu/100 mL max. BOD5
Credit For Downsizing Distribution Area:	YES
Fecal Credit For Reduction Of Vertical Separation:	YES
Additional Comments:	NONE

This approval supersedes the approval issued on 10/6/2006 under product file number 20060366.

This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number 20060366.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Jean M. MacCubbin, CST
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